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PATENT
P55890A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

SUNG-KOOG OH et al.

Serial No.: 10/059,342

Examiner: *to be assigned*

Filed: 31 January 2002

Art Unit: *to be assigned*

For: OPTICAL FIBER PREFORM MANUFACTURING METHOD FOR SHRINKAGE
AND CLOSING OF DEPOSITED TUBE (as amended)

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner
for Patents
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. §§ 1.56, and 1.97 and 1.98 applicant cites, lists, and discusses and encloses copies of the following art references cited in a *Notification of the Reason for Objection* from the Japanese Patent Office issued on the 4th of February corresponding Japanese patent application No. 2000-586648.

JAPANESE PATENT REFERENCES:

<u>Publication No.</u>	<u>Inventor</u>	<u>Published Date</u>
• Sho 52-56945	Sugimoto <i>et al.</i>	5 October 1977
"Processing Of Tubular Optical Fiber Material"		
and English language Abstract for Sho 52-56945		

- Sho51-11714 Tanigawa *et al.* unknown
"Apparatus To Manufacture Optical Fiber Material"
and English language Abstract for Sho 51-11714
- Hei 3-242342 Kamiya 29 October 1991
"Production Of Preform For Optical Fiber"
and English language Abstract for Hei 3-2242342
- Sho 63-315530 Kawakami *et al.* 23 December 1988
"Production Of Optical Fiber Preform"
and English language Abstract for Sho 63-315530
- Sho 51-20917 Tsukuda 19 February 1976
"Production Of Tube and Rod"
and English language Abstract for Sho 51-20917
- Sho 59-182243 Tsukamoto *et al.* 29 March 1983
"Manufacture Of Optical Fiber"
and English language Abstract for Sho 59-182243
- Sho 52-050247 Imoto *et al.* 22 April 1977
"Process For Manufacturing Optical Fiber"
and English language Abstract for Sho 52-050247

OTHER DOCUMENTS:

- Office action and *Notification of the Reasons for Objection* issued by the Japanese Patent Office on the 21st day of First Month of 15 years of the Heisei reign (24th of January 2003) in corresponding co-pending Japanese patent application assigned serial No. 2000-247833.

DISCUSSION

As explained by the Japanese Patent Office in its Notification of the Reasons for Objection, Sugimoto JP '945 and Tanigawa JP '843 make the claimed invention "easily foreseeable" as a "method of manufacturing the optical fiber preform using inner CVD method ... to supply Cl gas He gas into the glass tube, dehydrate and then collapse ..., to collapse reducing pressure on glass tube with one enclosed edge, to collapse a glass tube moving reciprocatedly cylindrical burner or cylindrical electric furnace."

Sugimoto JP '945 contemplates forming a rod-like optical fiber with good circularity, from a molten section that is free from any space on a portion of a tubular optical fiber material while moving a heating body along the lengthwise direction of the material and subsequently moving the heating body in the same direction.

Tanigawa JP '843 contemplates providing a heating source "that heats and melt the tubular optical fiber material with accumulated optical fiber glass on the inner walls into rod-like optical fiber material without any air gap and the container that keeps the said heating body in the air excluding the acid air to prevent consumption of the heating body while the structure keeping the quantity of flowing air in the said container, moving elastically along the lengthwise direction of the

material and covering said tubular glass material."

Kamiya JP '342 contemplates a relatively low refractive index glass layer for a clad that is formed on the inner periphery surface of a glass tube by using a MCVD method, and then depositing fine glass particles on the inside of the low refractive index glass layer. The deposited layer of fine glass particles is subsequently dehydrated.

Kawakami JP '530 discusses the production of an optical fiber preform but depositing metallic fine oxide particles containing SiO_2 on the inner wall of a quartz tube in order to form a porous deposit layer, passing the dehydrating agent through the quartz tube in order to dehydrate the porous deposited layer, transparently vitrifying the porous deposited layer while passing the dehydrating agent through the quartz tube and collapsing the quartz tube in a state while filled with the dehydrating agent.

Tukuda JP '917 discusses the manufacture of the tube or rod with a smaller diameter than the tube, and contracting the diameter the tube by heating tube while reducing the pressure inside of the tube.

Tsukamoto JP '243 has a hollowing glass that is used as the starting material, attached to a rotary support while oxygen gas and a raw material gas used for forming the glass layer is introduced into the rotating glass tube.

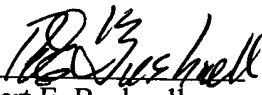
Imoto JP '247 discusses the manufacture of optical fibers with the use of vapor phase chemical reactions, by producing low-loss optical fibers having a full circular shape with less diametrical fluctuations, by integrating the process of the fabrication for a perform with the process of the wire drawing .

Pursuant to 37 CFR § 1.97 (e)(1), each item of information contain the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.

The citation of forgoing references is not tended to constitute representation to the Examiner that a search of the prior art has been made by the Applicant. Accordingly, the U.S. Examiner is requested to make a thorough and wide-ranging search of the prior art during the examination.

No fee is incurred by filing this Information Disclosure Statement.

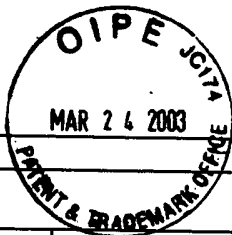
Respectfully submitted,


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INFORMATION DISCLOSURE STATEMENT

PTO-1449



SERIAL NUMBER 10/059,342

DOCKET NO. P55890A

APPLICANT

Sung-Koog OH et al.

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GROUP

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U.S. PATENT DOCUMENTS

EXAMINE	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE

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FOREIGN PATENT DOCUMENTS

TRANSLATION

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	N
	JP 52-56945	10/77	Japan			Abstract	
	JP 51-11714	Unknown	Japan			Abstract	
	JP 03-242342	10/91	Japan			Abstract	
	JP 63-315530	12/88	Japan			Abstract	
	JP 51-20917	02/76	Japan			Abstract	
	JP 59-182243	03/83	Japan			Abstract	
	JP 52-50247	04/77	Japan			Abstract	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

"Notification of the Reasons for Objection" issued by Japanese Patent Office dated on 24 January 2003

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.